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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/694,216	10/28/2003	Michael Patrick Harmon	08350.3198	3004
22852	7590	04/20/2005	EXAMINER	
FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP 901 NEW YORK AVENUE, NW WASHINGTON, DC 20001-4413			CORRIGAN, JAIME W	
			ART UNIT	PAPER NUMBER
			3748	

DATE MAILED: 04/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/694,216	<b>Applicant(s)</b> HARMON, MICHAEL PATRICK	
	<b>Examiner</b> Jaime W Corrigan	<b>Art Unit</b> 3748	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>12-10-04, 10-28-03</u> . | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Hara et al. (PN 4,708,101).

Regarding claims 1, 9, 13, 16 Hara discloses a block defining a combustion chamber (See Figure 8A, Abstract); a crankshaft (See Figure 8A, Abstract); an engine valve (See Figure 8A (19)) operatively associated with the combustion chamber and moveable between a first position at which the engine valve prevents a flow of fluid relative to the combustion chamber and a second position at which the fluid flows relative to the combustion chamber (See Abstract, Column 3 Lines 23-62); a cam follower (See Figure 8A (15)) operatively connected to the engine valve; a first cam (See Figure 8A (17), (16)) adapted to engage the cam follower such that the rotation of the first cam, in response to a rotation of the crankshaft, acts to move the engine valve from the first position to the second position during a first lift period (See Figures 12-13, Column 6 Lines 24-68, Column 7 Lines 1-39); a second cam (See Figure 8A (13)) adapted to engage the cam follower such that the rotation of the second cam, in response to a rotation of the crankshaft, acts to affect the movement of the engine valve

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from the first position to the second position during a second (See Figures 12-13, Column 6 Lines 24-68, Column 7 Lines 1-39) lift period; and a phase shifting device (See Figure 8B (23)) operatively connected to the second cam and adapted to adjust the relative timing between the first lift period and the second lift period (See Column 4 Lines 65-68, Column 5 Lines 1-16).

Regarding claims 2, 17 Hara discloses the phase shifting device includes a helical spline and a hydraulic actuator (See Figure 9).

Regarding claims 3, 10, 18 Hara discloses the second lift period overlaps with at least a portion of the first lift period (See Figure 12-13).

Regarding claims 4, 19 Hara discloses the cam follower includes a first end and a second end, the first end and the second end being pivotable about a central axis (See Figure 8A).

Regarding claims 5, 20 Hara discloses the first cam (See Figure 8A (17)) selectively engages the first end of the cam follower and the second cam (See Figure 8A (13)) selectively engages the second end of the cam follower .

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Regarding claims 6, 21 Hara discloses rocker arm (See Figure 8A (15)) operatively connected to the engine valve and a push rod (See Figure 8A (16)) operatively connected between the cam follower and the rocker arm .

Regarding claims 7-8, 11, 12, 14-15, 22 Hara discloses a first impact (See Figure 8A (15)) absorbing device adapted to absorb the impact between the first cam (See Figure 8A (17), (16)) and the first end of the cam follower; and a second impact absorbing device (See Figure 8A (15A)) adapted to absorb the impact between the second cam (See Figure 8A (13)) and the second end of the cam follower.

### **Conclusion**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kobayashi et al. (PN 6,230,675), Mitchell (PN 5,787,849) disclose similar valve actuators.

Any inquiry concerning this communication from the Examiner should be directed to Examiner Jaime Corrigan whose Carlyle telephone number is (571) 272-4858. The Examiner can normally be reached on Monday – Friday from 8:30 a.m. – 6:00 p.m. 2<sup>nd</sup> Friday off.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner supervisor, Thomas E. Denion, can be reached on (571) 272-4859. The fax number for this group is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-3700.

JC

Jaime Corrigan



Patent Examiner  
Art Unit 3748

April 18, 2005



THOMAS DENION  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3700